Aura Validation Meeting

Status of MLS N_2O observations

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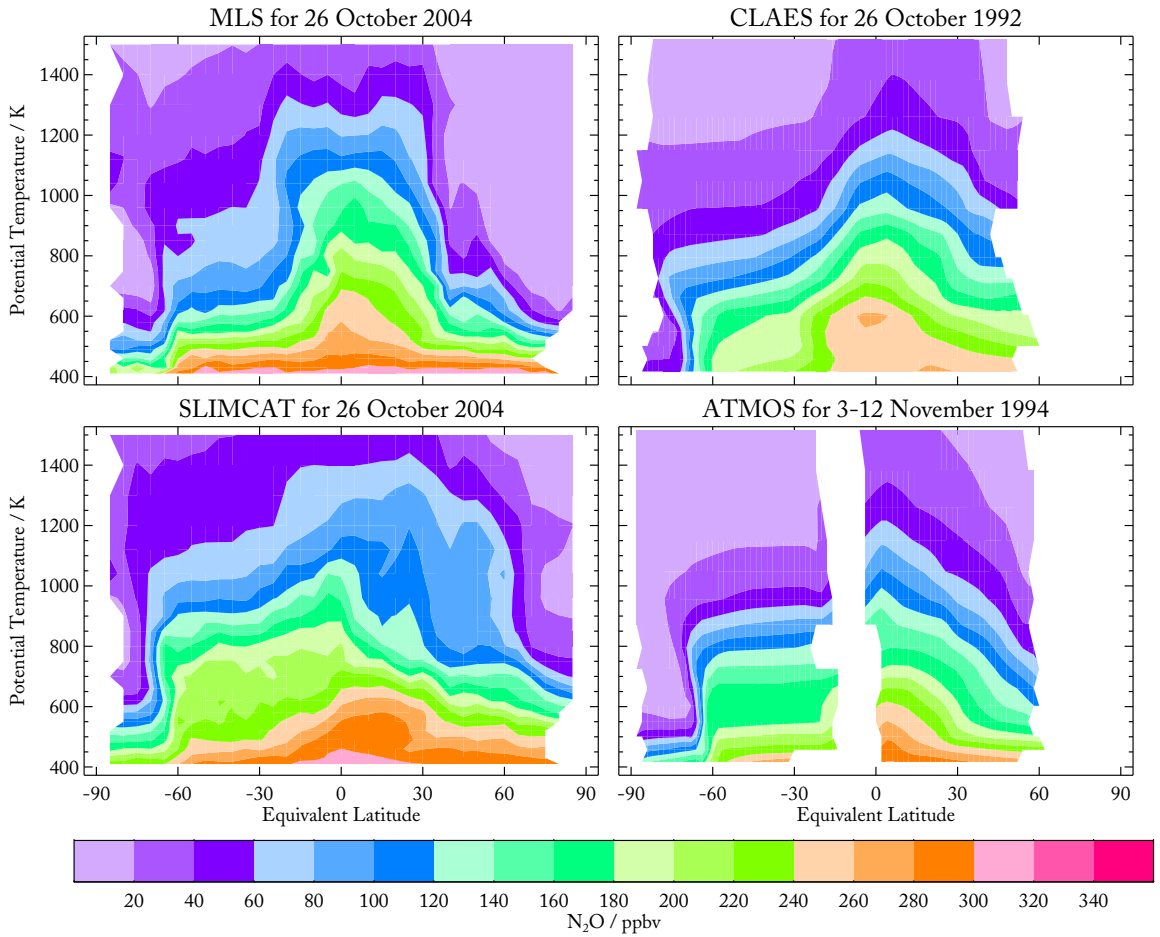
Comparisons to models and other satellites



- Plot shows equivalent latitude / potential temperature comparisons of MLS N_2O on 26th October 2004, with various other datasets.
- The SLIMCAT model is run in real time and sampled at the MLS locations.
- CLAES data are taken from 26 Oct 1992, ATMOS from early November 1994.
- Initial comparisons are encouraging.

- All datasets clearly show descent in the winter polar vortex, though differ on the strength.
- MLS seems to show the classical sub-tropical 'double peak' better than CLAES or ATMOS.
- SLIMCAT shows significantly more N_2O in the mid-latitude mid-stratosphere than MLS.
- **See poster session for more details on MLS N_2O.**

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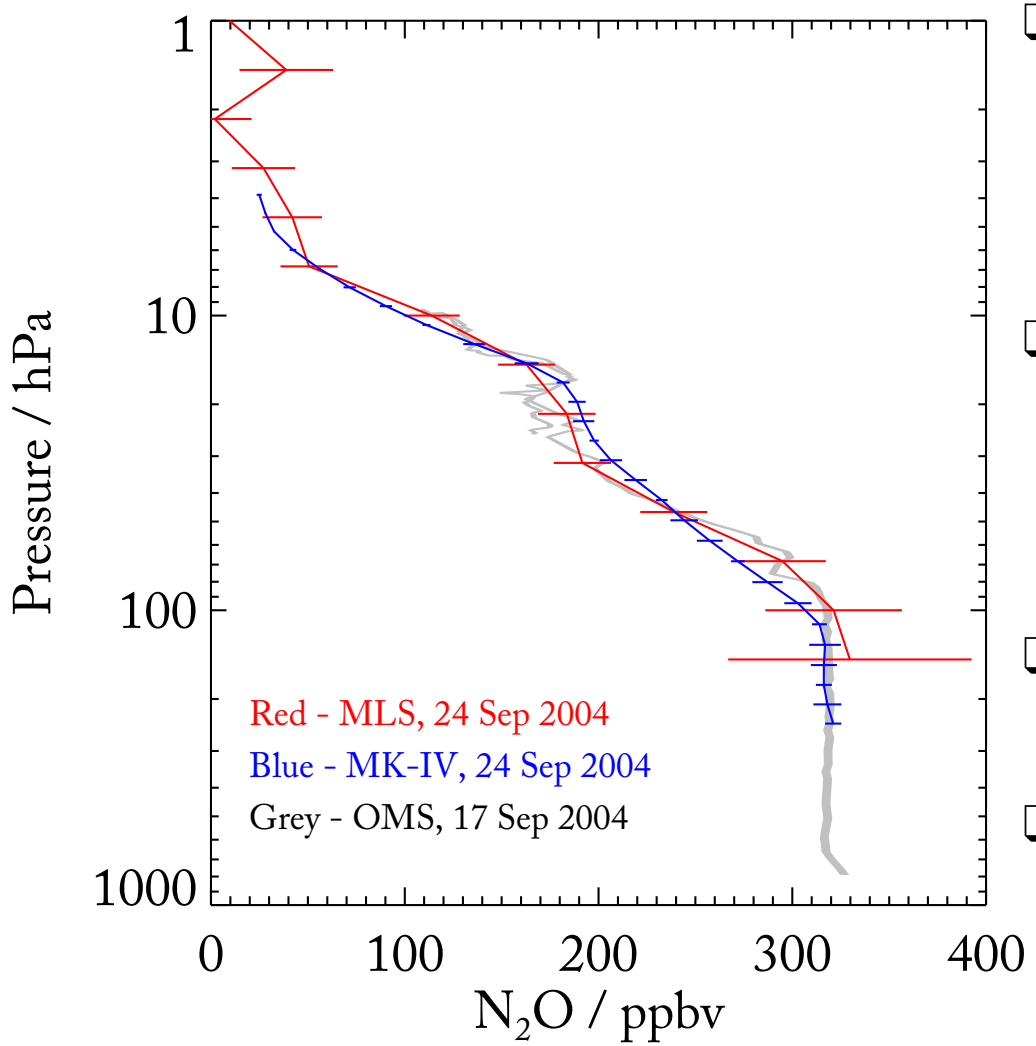
Comparisons with balloon observations



- Plot to left shows comparisons of to Balloon N_2O observations with MLS.
- The MLS profile shown is the one closes to the remote (MK-IV) observations.
- Initial agreement is very encouraging.
- Thanks to Jim Elkins, Geoff Toon and Ross Salawitch for Balloon data.

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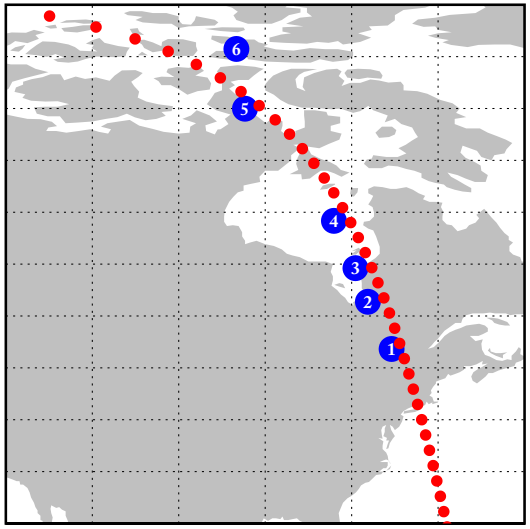
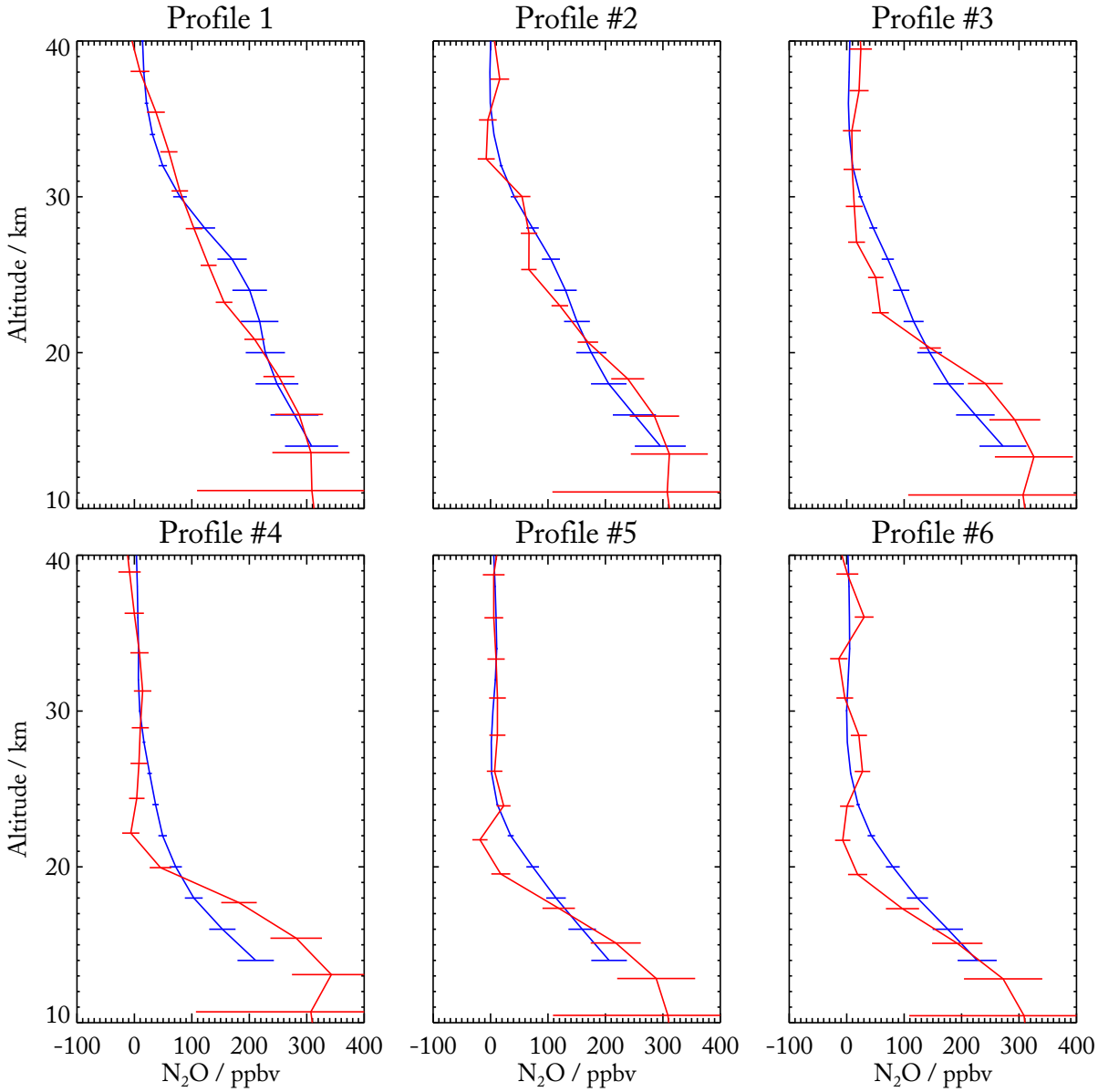
Comparisons with the ASUR PAVE observations



- Red points/profiles are MLS, blue are ASUR.
- The vertical resolution of ASUR (6 km in lower strat. 12 km above) is a factor here.
- More discriminating comparisons involving averaging kernels will be necessary for definitive statements to be made.



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